A COMPARATIVE STUDY OF THE CURRENT STATUS AND FUTURE NEEDS OF LIBRARY AUTOMATION AND NETWORKING IN DELIVERING LIBRARY SERVICES AT GOA STATE CENTRAL LIBRARY AND KARNATAKA STATE CENTRAL LIBRARY

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INTRODUCTION:

A public library is a gateway to knowledge centre that is open to all the members of the community without charging anything to access its resources for reference or circulation. These are generally funded from the Government grants, Public sources, such as taxes. First, the rhetoric: 'According to Doctorow, the three most important documents a free society gives are a birth certificate, a passport, and a library card'. (Wiegand, W.A., 2015). With India's growing economical position in this emerging power world, a new consciousness is developing in the minds of the civil about the need to reinvest in the public libraries for offering advanced services.

There are five fundamental characteristics shared by public libraries. The first is that they are generally supported by taxes (usually local, though any level of government can and may contribute) they are governed by a board to serve the public interest; they are open to all and every community member can access the collection, they are entirely voluntary in that no one is ever forced to use the services provided; and public libraries provide basic services without charge.

HISTORY OF LIBRARY AUTOMATION:

The application of computers in library and information field has made a phenomenal progress in industrialized countries where the hardware, software and other communication facilities are well developed. In view of their technological advancement, they are able to computerize their entire library and information systems functionality with ease. In 1880, Herman Hollerith, an American, invented the punch card for tabulating and summarizing the census data. This invention of the punched card marks the beginning of the era of semiautomatic data processing systems that dominated the landscape for nearly a century. Even today, there is no end to this invention, it is being used for automation in many fields.

In 1936, the University of Texas was the first to use the punch cards for circulation control and for serial control in the mid 1940's. The library of congress used the unit record machines for the first time in 1950's for producing library catalogues. In India, INSDOC was the leader to experiment with computers for their application in documentation and information work in 1964. Initially, they made the use of IBM 1620 Model I which was already available at IIT Kanpur. An attempt was made to computerize the data collected for union catalogue of serial control. (Raizada, 1965)

Library automation may be defined as the application of automatic and semi-automatic data processing machines, say computers, to perform the traditional housekeeping activities of the library such as acquisition, circulation, cataloguing, serial control etc. In modern times, library automation has become a buzz word to describe a library running with computer mechanism.

HISTORY OF LIBRARY NETWORKING:

The origin of library networks and their traces of development can be seen since the 1960's. With the growing data, no library can sound financially enough to be self-sufficient as far as information sources and infrastructure facilities are concerned. The terms like library co-operation, library resource sharing and library networking are now used synonymously as shown by attempts to define them.

Knowledge and information can be considered as the foundation of the human development where communicating and sharing information is necessary. Here, the concept resource sharing arises and becomes the central focus of interest to the information professionals.

The emergence of Information Technology with Networking as a media has bought tremendous changes in the field of library and information sciences. The 21st century clearly makes us realize that information provides unseen opportunities that enable multifaceted growth and development. Even, the information super highway has altered and changed our outlook about the information

dissemination. Thus, there is a need for the libraries to rethink and plan their library operations with the emerging technologies so as to grow with this technological world. This gives us a clear idea that library is dependent on life and change.

The term "Networking" or network is used in different contexts. Information network has become very popular and is used frequently by information specialists.

Raynard C.Swank defined library networks as a 'Concept that includes the development of co-operative systems of libraries on geographical, subject, or other lines, each with some kind of center that not only co-ordinates the internal activities of the system but also serves as the system's outlet to and inlet from, the centers of other systems'.

A network is defined by the National Commission on Libraries and Information Science (NCLIS), USA as 'two or more libraries and/or other organizations engaged in a common pattern of information exchange, through communications, for some functional purpose'. (Wedgeworth, Robert, 1993)

There are basically two types of networks: 1) Computer Network and 2) Communication Network. 'Computer network is concerned with the sharing of the computer load, software, and hardware and computer time. Communication network is mainly concerned with data transmission. These networks can carry large amounts of data over long distances. While planning a network, the costs of installation and access should be considered'. (Durgadevi, K., and Usha, P., 1998)

Kent, Allen (1978) expressed that the success and survival of library and Information Centers will depend on how much and what extent libraries cooperate with each other in future.The increasing costs of information source materials, increasing cost of processing documents and their information contents, decreasing budgets and wide use of micro and mini computers have contributed to the development of networks.

REVIEW OF LITERATURE:

Library Automation and Networking:

A brief review of literature as library automation and networking are as follows:

Alice Keefer, (1992) in their review Spain's libraries have experienced sizeable modification in the past decade as the result of economic boom and restructuring by the government after a long course of time. The first attempt towards automation was made in the late 1960s, which had rapidly increased in the past 5 years with the emergence of the new software packages. The step of automation and the software solution chosen may vary according to the dissimilar types of libraries.

Aswal, (2006) in this document 'Library automation for twenty first century' highlights library automation in the twenty first century is on interconnecting systems and sharing information resources through advanced networking and ensuring equitable access to a wide range of users and information. These developments include the increase of the use of internet and networks. Books are a guide for planning process for a library automation system of all types and sizes. The library are needs more sophisticated, if your present library automation is not suitable for latest technology environment of twenty first century and your library system does not work correctly, you should look for recently developed library systems. Seize this moment to assess your system can support you meet your services aims.

Banieghbal (2001) in his study the situation of thirty four libraries affiliated with TehranUniversity their organizational structure and services and facilities. As well examines the feasibility of establishing an information network and discusses the grounds for cooperation between libraries and its effect on resource sharing in order to offer information services more quickly and

effectively. Lastly established an information network between libraries affiliated with Tehran University could considerably develop the status of technical and information services.

Gadalwad S.G, (2015) the present paper traces in brief the library automation history inIndia. It try to study the different factors that indirectly or directly affect the procedure of library automation such as history of library automation, development of library automation growth, implementing library automation, need of library automation, availability of suitable software, basic requirement, objective, special future, disadvantages and advantages of library automation.

John-Oswald Amekuedee, (2005) in this study author undertake to search library activities automated in Ghana's 3 old public university libraries that is, the library and the University of Cape Coast (UCC) Library, KNUST Balme Library.

Khan (2005) in this document networking and resource sharing activities among universities in Pakistan in two thousand five. The Pakistan Education and Research Network (PERN) connect all the private and public universities. It provides real time transfer of video and audio, multimedia-enabled lectures and remote research cooperation.

Liu (2000) in this document reported the Tsinghua University improving their interlibrary resources sharing by means of build up networked libraries.

Oghenevwogaga Benson Adogbeji, **(2005)** in their study reports focus on the decision to go redirect with action plans for library automation, and their details, including the number of computers and their capacity, the networking pattern utilized in the automation of the Delta State library and the operating systems.

Okon (2005) these studies focus on the implementation of ICT in university libraries in the Nigeria. The study suggested that computer networking of university libraries is practicable and recommends the growth of the academic libraries network and Nigerian university libraries network.

Pandey, (1999) this Encyclopedia focus on Library Automation Systems and Network the most through treatment obtainable on the application of computer science techniques to information managing problems. This distinctive work is a completely integrated introduction of library automation and networking.

Singh, (2008) in their study "Library automation in modern age" explained with the improvement of sophisticated techniques and tools, now library automation has become simple and more accessible. Certainly, the information contained herein will show equally informative and useful to academics as well as professional in the area concerned.

Thapa (2004) this article covers it situated the condition of automation in libraries of Jabalpur district in M. P. state. It point at analyzing and understanding the different problems faced by the staff and authorities during the procedure of automation and remanded ways and means to defeat these problems.

Tom Sloan, **(1996)** the review focused on the automation and networking of libraries in Delaware is moving rapidly. In 1990, Delaware organize conferences on the library and information services nation and state based. Following the White House conference, the Delaware library group held a state wide organize conference, which present "An action agenda for Delaware libraries," fifteen concise resolutions to substantially develop Delaware libraries by the year two thousand. The automation and networking of libraries was the top agenda of this conference.

PUBLIC LIBRARY AUTOMATION AND NETWORKING:

A brief review of literature as Public library automation and networking are as follows:

Arthur (1990) in this study author discussed out that the economic and political context of public libraries outlay was surveyed and the question of developing for public library services was discussed value for funds and performance show were examined and new difficulty for spending development considered within master plan for public library development.

Cronin (1984) explained the logical for a marketing view to the management of public library services. See the history of public library services and their technological and social changes. Finally that, after above a century, the public library development in the United Kingdom still does not have a logical sense of purpose, or a strong public likeness, and that marketing could provide a basis for their development.

Fourie (2007) this article explained the investigation into the public libraries role in the provision of vocational and educational guidance and information to the youth and its connection to the school and other career direction service providers in South Africa are reported. The experiential study explained public library services to the general, youth and to high school learners in specific. The results showed the public libraries continue to provide independent user services to children but that independent provision is only made for young adults and teenagers in the case of big public libraries. Career-related requests are regularly received from high school learners but insufficient resources affect the improvement of specialized vocational guidance and educational and information services for them. Deficiency of cooperation between school libraries, public libraries and other career guidance service providers hampers the development of support networks for learners. It is suggested that existing common user services to the youth could be extended to present specialized vocational guidance and educational and information services for high school learners. Conclusions are made in respect of facilities, collections, funding and staff.

Indira Koneru (2007) author explained modernizing public library with required Information Communication Technology (ICT) infrastructure alone cannot guarantee unbiased and easy access to information, as envisioned by National Knowledge Commission. If public libraries play essential role in building inclusive knowledge societies, they need to develop citizen with information literacy. In order to realize this objective, equipping themselves with information literacy skills is essential for public library professionals.

Kulesakaran (2006) author focused on the functions of types of public libraries and public libraries service units in Tamil Nadu. He also explained the future plans and activities of the public library department of Tamil Nadu in the light of modernization importance.

Parthasarathy (1988) author explained integrated and modernized system, further library services and house-keeping operations for introducing networking, accessing data-base; for conducting specialized training courses are developed.

Shuji, K. (2007) has focused on the library services using most recent information technologies such as smart card and RFID are spreading quickly. Naka City public library presented above-mentioned technologies and start a new card less service using biometrics technology to growth user saving resources security, convenience, etc. This paper explains technical verifications, details, backgrounds, and effects of introducing biometrics technology and report the view of efforts to change the card society into a card less one.

NEED FOR THE STUDY:

With the information explosion, the goal of any library would be to provide right information, to right person, in right manner, in right time. Thus, to fulfil this ultimate goal, there is a need to adopt the right technology at the right time. The bell has rung for the automation and networking projects to be taken up in the libraries. In modern sense, the word 'automation' implies to the predominant use of the computers and related technologies with similar mechanism to serve the purpose.

The use of computer's in the library began in the early 1980's. In that stage, libraries used such mechanisms to meet its house-keeping operation. A considerable saving in efforts, Time and resources involved in manual processing are achieved through this. However, with the growing technologies, the library automation today has gone much beyond the automation of just house-keeping activities in the libraries and this has been proved by many researchers carrying out their studies. Automation is a state of replacing the human performance of activities with mechanical or electronic processes. It is a process of adding electronic resources to its bibliographic resources and replacing its human performances with electronic processes. At one end, automation of the libraries is helping the library staff to serve their patrons with better services. At the other end, it cannot be neglected that without staff potential and training, the automation concept could remain unsoundful.

There is a need to expand our vision, analyze and build a framework for the next step in the automation. As an initial step, there is a need to determine the functions and their priorities in order to automate to build an effective system. With the demand and development of the information technologies, finance and budget has mostly been a barrier in upgrading the libraries.

STATEMENT OF THE PROBLEM:

A comparative study of the current status and future needs of library automation and networking in delivering library services at Goa State Central Library and Karnataka State Central Library.

OBJECTIVES OF THE STUDY:

The purpose of this research work is to critically study and analyze the growth and development of the libraries under study in view of its automation and networking. This study will help us to understand the various barriers in setting up an effective automated library. This study will draw our attention to provide feasible and cost effective solution to remove the barriers and providing hurdle free quality service to the user community.

The objectives of the study are:

1. The study the present status of the Library Automation and Networking in the Central Public Libraries of Goa and Karnataka State.
2. To study the provision of budget for library automation and networking.
3. To understand the technical skills of the staff in these libraries for library automation and networking.

4. To evaluate the use of the library software/hardware's adopted by the libraries under study in its housekeeping operations. (Acquisition, Circulation, Cataloguing, Serial Control, OPAC/Web OPAC etc.)
5. To find out the various barriers faced by these libraries staff during automation and networking.
6. To study the usage of networking facility for sharing of information and resources used to meet the needs of the user community.
7. To find out the user's satisfaction, with the automation and networking carried out in these libraries to deliver smooth services.
8. To suggest the solution for future development of automation and networking facility in these state central libraries.

HYPOTHESIS OF THE STUDY:

1. 1. There is no significant difference in the automation and networking facilities available in State Central Public Libraries of Goa and Karnataka State.
2. There is no difference in the provision of the budget allocation for library automation and networking at State Central Public Libraries of Goa and Karnataka State.
3. There is no significant difference in the technical qualifications and proficiency skills of the staff handling the library automation services at State Central Public Libraries of Goa and Karnataka State.
4. There is no significant difference in the utilization of the library automation system by the users at State Central Public Libraries of Goa and Karnataka State.
5. There is no difference in the barriers faced by the library staff while accessing automation and networking systems at State Central Public Libraries of Goa and Karnataka State.

RESEARCH DESIGN:

The present study intends to investigate and compare about the current status and the future needs for library automation and networking in delivering library services at State Central Libraries of Goa and Karnataka States. This study will be conducted based on the primary data to be collected using Descriptive Method. Further, to some extent, this study would demand to use the Historical Method for understand the procurement of automation and networking technologies by the libraries from the time of its establishment.

To conduct a research, various techniques needs to be considered. This type of research method involves describing in detail, a specific situation using various research tools like interviews, surveys and observation. In this survey, we would primarily deal with survey and observation techniques.

Questionnaire, Interview and Observation are the techniques and tools that enable us to collect the primary data. The data that is collected by some other researcher or the agency for some other purpose is called secondary data. Thus, secondary data is the readily available data. For the present study, 'Questionnaire data collection technique' is to be used as the main source of primary data for evaluation and assessment. Further, as questionnaire method has some limitations to collect the data, the interview and the observation methods are to be used to supplement the questionnaire method and bring more clarity to the data.

SAMPLE:

In this study, the target audience selection would be based on Random Sampling Technique as in this sample we would consider the totality of the elements selected from the population. The selection for the study would comprise of the librarians of the libraries, their staff, researchers and the users of various age groups at the library using random sampling technique. Further, the simple random sampling technique is to be used to collect the data from the population. This study would include randomly selected 50 library staff and 300 library users of both the libraries. Further, the

filled up questionnaires would be collected from the respondents to carry out data analysis and Interpretation.

SCOPE AND LIMITATIONS OF THE STUDY:

The sample population for the proposed research would be limited only to the registered users of the libraries under study. No data would be collected from the users visiting these libraries on short time basis, casual visits, library tour etc. Further, data would be collected from librarian's of both the libraries. This study would be bound to the walls of Goa State Central Library and Karnataka State Central Library. The level of automation and networking in various house-keeping operations and the various services being offered using these technologies would be studied in these libraries.

CHARACTERISTICS OF STUDY POPULATION:

Being a public library, funded by the State, it is open to all, and everyone is allowed to use its facilities. The primary users of library are Minor age children, Teenagers, Students, Job holders in private / public undertakings, Housewives, Old age / Retired individuals etc.Inter-library loan services have been extended to prisons, government and non-government organisations also.

GOA STATE CENTRAL LIBRARY (KRISHNADAS SHAMA CENTRAL LIBRARY):

Goa State Central Library (renamed the Krishnadas Shama Central Library in 2012) is the main library in the State of Goa, India. It is located in Panjim (Panaji) and its website claims that it is the first public library to be set up across India, in the early 1830s.The State Central Library Goa is currently under the administrative control of Government of Goa's Directorate of Art & Culture.

The library was first housed in the first floor of the Police Building in Panjim (Panaji), Goa's state capital. Since 2011, the library has shifted to its new premises in the Pato locality of Panjim, near the main bus stand. It is housed in a spacious, six-floor building covering an area of 13,369 square metres.The library has a collection of over 2,50,000 printed resources and access to over 9 million digital resources. The library is named after Krishnadas Shama, who founded the Konkani Prose and known as Father of Konkani literature, to recognize his contribution in the field of literature in 16th century.The library offers modern facilities like Self Check-in/ Check-out Kiosk, Book Drop Box using RFID, Book Lift, etc.

This library is open to be accessed by all, and everyone is allowed to use its facilities. Home-lending however requires membership of the library, which currently costs between Rs 200 to 750 (lifetime deposit, no annual fee).

The library infrastructure and services being provided are mentioned below:

First Floor: The First Floor consists of the Membership Counter, Book Issue/ Return, Self Check-in/ Check-out kiosk, Book Drop Box, Newspaper/ Periodical Section, Braille Section, Exhibition Hall & Art Gallery, Book Shop and Property Counter

Second Floor: The Second Floor consists of the Maps & Globes Section, Children's Section, Audio Visual Hall for Children, Lecture Hall, Study Room, Gymnasium for Staff, Indexing Section, Internet Browsing Section and Delivery of Books Act Section.

Third Floor: The Third of the Library consists of the Books & Magazines Lending Section, Administration & Establishment, RRRLF Section, Technical Section, Chamber of Curator, Office of Sr. Librarian, Conference Hall, and Research Scholar Cubicles.

Fourth Floor: The Fourth Floor of the Library consists of the Manuscripts & Imprints which includes languages like Tamil, Castilian, Ceylonese, Canary, Old newspaper & magazines,

Microfilm/ CD Browsing section, Data Imaging Center, Fumigation Chamber, and Book Conservation Laboratory.

Fifth Floor: The Fifth Floor consists of the reference books which includes Encyclopedias, Handbooks, Dictionaries, Competitive Exam Books, etc., Laptop Section, and Reading Terrace.

Sixth Floor: The Sixth Floor of the Library consists of over 37,000 volumes of books and bound journals in Portuguese, English, Latin, French languages all acquired during pre-liberation period.

STATE CENTRAL LIBRARY, BANGALORE:

The State Central Library is situated in the historical building Sir Seshadri IyerMemorial Hall at Cubbon Park, Bangalore. It was established in the year 1913. Seshadri Iyer Memorial Hall, was built in honour of Sir K.Seshadri Iyer who was Dewan of Mysore State from 1883 to 1901. This library functions as the Apex of the Karnataka Public Libraries system, which is governed by State Library Authority.

It began functioning as a public library with 4750 books and 215 members in the year 1915.

The Karnataka Government took over the library in 1966 and converted the public library into the State Central Library in 1986, where it was opened to the public only for consultation of the documents within its premises.In 2000, the Library was awarded the Raja Ram Mohan Roy Library Foundation Award for the best state central library in India in appreciation of its exceptional contribution to commendable services rendered in spreading knowledge and gearing up of library movement in the city of Bangalore in particular and in the state of Karnataka.

It houses more than 3 Lakh books and around 300 periodicals and newspapers, and also has a section of rare volumes. Most of the users at this library, use for academic purposes, especially to prepare for competitive exams. It also has a Braille section which was inaugurated in the year 2017 to make valuable books more accessible to the blind. Around 5-10 people visit this section every day.

OPERATIONAL DEFINITION OF THE TERMS AND CONCEPTS:

(i) Automation: According to the Encyclopedia Britannica, **Automation** means application of machines to tasks once performed by human beings or, increasingly, to tasks that would otherwise be impossible.

(ii) Library Automation: According to Encyclopedia of Library and Information Sciences "Library Automation is the use of automatic and semiautomatic data processing machines to perform such traditional library activities as acquisitions, cataloguing, and circulation.

(iii) Networking: According to Merriam-Webster (1828), networking means the exchange of information or services among individuals, groups, or institutions.

(iv) Library Networking: Library Networking is the cooperative or collective activity of linking the members/users to the resources hosted on computers by means of telecommunication connections.

(v) Library Services: These are the direct and indirect services provided by the libraries and information centers to their users or clients in person and through communication technologies.

(vi) Public Library:A public library is a library that is accessible by the general public and is generally funded from government grants, public sources such as taxes.

(vii) State Central Library: The library that is the apex of the State's Library System.

SIGNIFICANCE OF THE STUDY:

The general significance of the study are enumerated below:

- The study is expected to provide a basis for comprehensive study on the application of the information and communication technology procurement and its application in view of library automation in the central libraries of Karnataka and Goa State.
- This study will help us to analyse the existing gaps in the adoption of ICT in the library operations.
- This study will draw attention on the problems faced by these libraries in automating themselves.
- The efficiency and effectiveness of the library services of these central libraries can be understood.
- The output of the study, will serve as a blue print for the libraries, information managers or information scientists, researchers to chart the right course for the use or application of information and communication technology or automation of libraries to handle the explosion of knowledge, so as to serve its users in an effective manner.

CHAPERIZATION:

Chapter I – Introduction

Chapter II – Review of Literature

Chapter III – Public Library Automation And Networking With Special Reference To India

Chapter IV – Research Findings and Analysis of Data

Chapter V – Conclusion and Suggestions

REFERENCES: A list of the references will be presented.

APPENDICES: A Questionnaire shall be provided.

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